

1967
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A MATHEMATICAL MODEL FOR INTELLIGENCE WARNING

Foreword

This working paper describes a research effort in the Directorate of Intelligence on mathematical modeling of strategic warning analysis. The paper covers the logic of the model used, the problems encountered in applying it to a simulation of intelligence analysis before the Cuban missile crisis of 1962, and the results achieved. Apart from one or two topics set aside for discussion in the mathematical notes, the study is written to be read and understood by the non-mathematical intelligence analyst.

The first results of the research are not conclusive, although they are encouraging enough to justify further test trials of the model. These tests will also simulate intelligence analysis in past crisis situations and will again draw only on the evidence actually available at the time.

Since the first results are so preliminary in nature, their presentation in this paper should not be taken to reflect an official position of the Directorate of Intelligence on the merit of mathematical modeling in general or of any models in particular for strategic warning analysis. This working paper is intended to serve only as a progress report on research to date. Criticisms are solicited from readers engaged or interested in research on numerative techniques for predictive analysis. Suggestions for future lines of investigation would be welcomed. Comments may be addressed to the author, Jack Zlotnick of the Directorate of Intelligence Planning Staff, extension 5873.